

JUN 23 2008

AMENDMENTIn the Claims:

Please amend instant claim 16 and add new claim 18, as follows:

1. (Original) An aqueous coating composition comprising a pigment and an aqueous acrylic emulsion polymer comprising, as copolymerized units, from 50 to 99.75% by weight, based on dry polymer weight, monoethylenically unsaturated nonionic (meth)acrylic monomer and from 0.25 to 10% by weight, based on dry polymer weight, monoethylenically unsaturated acid monomer, said polymer having a glass transition temperature (Tg) of -10 °C to 35 °C wherein said emulsion polymer is formed by emulsion polymerization at a temperature of from 70 °C to 99 °C in the presence of a thermal initiator, wherein said initiator is used in the amount of 0.3% to 0.4%, by weight, based on dry polymer weight, and wherein less than 0.15% by weight, based on dry polymer weight, of said initiator is present during the first 10%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer; 0.001 to 0.05 moles of chain transfer agent/kg monomer; and a neutralizer, wherein said neutralizer is used in the amount of from 5% to 75%, on an equivalents basis, based on said monoethylenically unsaturated acid monomer, and wherein less than half of said neutralizer is present during the first 25%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer.
2. (Original) An aqueous coating composition comprising a pigment and an aqueous acrylic emulsion polymer comprising, as copolymerized units, from 50 to 99.75% by weight, based on dry polymer weight, monoethylenically unsaturated nonionic (meth)acrylic monomer and from 0.25 to 10% by weight, based on dry polymer weight, monoethylenically unsaturated acid monomer, said polymer having a Tg of -10 °C to 35 °C wherein said emulsion polymer is formed by emulsion polymerization at a temperature of from 70 °C to 99 °C in the presence of a thermal initiator, wherein said initiator is used in the amount of 0.05 to 0.3%, by weight, based on dry polymer weight, and wherein less than half of said initiator

is present during the first 10%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer, and a neutralizer, wherein said neutralizer is used in the amount of from 5% to 75%, on an equivalents basis, based on said monoethylenically unsaturated acid monomer, and wherein less than half of said neutralizer is present during the first 25%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer.

3. (Original) The aqueous coating composition of claim 1 or claim 2 wherein said aqueous acrylic emulsion polymer comprises, as copolymerized units based on dry polymer weight, from 50% to 99.65% by weight monoethylenically unsaturated nonionic (meth)acrylic monomer, from 0.1% to 12.5% by weight aldehyde reactive group-containing monomer, and from 0.25% to 10% by weight monoethylenically unsaturated acid monomer.
4. (Original) The aqueous coating composition of claim 1 or claim 2 further comprising from 2% to 40% by weight, based on the total dry polymer weight, of a second emulsion polymer that has a Tg of from 25 °C to 150 °C, wherein the Tg of said second polymer is at least 10 °C higher than the Tg of said aqueous acrylic emulsion polymer.
5. (Original) The aqueous coating composition of claim 1 or claim 2 having a PVC of 15 to 38 and having VOC less than 5% by weight based on the total weight of the coating composition.
6. (Original) The aqueous coating composition of claim 1 or claim 2 having a PVC greater than 38 and having VOC less than 3% by weight based on the total weight of the coating composition.
7. (Original) The aqueous coating composition of claim 1 or claim 2 having a PVC of 15 to 85 and having VOC less than 1.7% by weight based on the total weight of the coating composition.

8. (Canceled)
9. (Canceled)
10. (withdrawn) A process for forming an aqueous acrylic emulsion polymer, said polymer having a glass transition temperature (T_g) of -10 °C to 35 °C, wherein said emulsion polymer is formed by emulsion polymerization of monomers comprising from 50 to 99.75% by weight, based on dry polymer weight, monoethylenically unsaturated nonionic (meth)acrylic monomer and from 0.25 to 10% by weight, based on dry polymer weight, monoethylenically unsaturated acid monomer, at a temperature of from 70 °C to 99 °C in the presence of a thermal initiator, wherein said initiator is used in the amount of 0.3% to 0.4%, by weight, based on dry polymer weight, and wherein less than 0.15% by weight, based on dry polymer weight, of said initiator is present during the first 10%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer; 0.001 to 0.05 moles of chain transfer agent/kg monomer; and a neutralizer, wherein said neutralizer is used in the amount of from 5% to 75%, on an equivalents basis, based on said monoethylenically unsaturated acid monomer, and wherein less than half of said neutralizer is present during the first 25%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer.
11. (withdrawn) A process for forming an aqueous acrylic emulsion polymer, said polymer having a glass transition temperature (T_g) of -10 °C to 35 °C, wherein said emulsion polymer is formed by emulsion polymerization of monomers comprising from 50 to 99.75% by weight, based on dry polymer weight, monoethylenically unsaturated nonionic (meth)acrylic monomer and from 0.25 to 10% by weight, based on dry polymer weight, monoethylenically unsaturated acid monomer, at a temperature of from 70 °C to 99 °C in the presence of a thermal initiator, wherein said initiator is used in the amount of 0.05 to 0.3%, by weight,

based on dry polymer weight, and wherein less than half of said initiator is present during the first 10%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer, and a neutralizer, wherein said neutralizer is used in the amount of from 5% to 75%, on an equivalents basis, based on said monoethylenically unsaturated acid monomer, and wherein less than half of said neutralizer is present during the first 25%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer.

12. (withdrawn) A process according to claim 9 wherein the polymer is formed in the presence of 0.001 to 0.05 moles of chain transfer agent/kg monomer.
13. (withdrawn) A process according to claim 9 wherein the polymer is formed in the presence of 0.0025 to 0.05 moles of chain transfer agent/kg monomer.
14. (withdrawn) A process according to claim 10 or 11 wherein the monomers comprise of from 50% to 99.65% by weight monoethylenically unsaturated nonionic (meth)acrylic monomer, from 0.1% to 12.5% by weight aldehyde reactive group-containing monomer, and from 0.25% to 10% by weight monoethylenically unsaturated acid monomer.
15. (previously presented) An aqueous coating composition as claimed in claim 1, wherein the copolymerized units of monoethylenically unsaturated acid monomer comprise copolymerized sulfoethyl methacrylate or phosphoethyl methacrylate.
16. (currently amended) An aqueous coating composition comprising a pigment and an aqueous acrylic emulsion polymer comprising, as copolymerized units, from 50 to 99.75% by weight, based on dry polymer weight, monoethylenically unsaturated nonionic (meth)acrylic monomer and from 0.25 to 10% by weight, based on dry polymer weight, monoethylenically unsaturated acid monomer, said polymer having a glass transition temperature (T_g) of -10°C to 35°C wherein said emulsion polymer is formed by emulsion polymerization at a temperature of

from 70 °C to 99 °C in the presence of a thermal initiator, wherein said initiator is used in the amount of 0.3% to 0.4%, by weight, based on dry polymer weight, and wherein from 0.078% to less than 0.15% by weight, based on dry polymer weight, of said initiator is present during the first 10%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer; 0.001 to 0.05 moles of chain transfer agent/kg monomer; and a neutralizer, wherein said neutralizer is used in the amount of from 5% to 75%, on an equivalents basis, based on said monoethylenically unsaturated acid monomer, and wherein less than half of said neutralizer is present during the first 25%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer.

17. (previously presented) An aqueous coating composition comprising a pigment and an aqueous acrylic emulsion polymer comprising, as copolymerized units, from 50 to 99.75% by weight, based on dry polymer weight, monoethylenically unsaturated nonionic (meth)acrylic monomer and from 0.25 to 10% by weight, based on dry polymer weight, monoethylenically unsaturated acid monomer, said polymer having a Tg of -10 °C to 35 °C wherein said emulsion polymer is formed by emulsion polymerization at a temperature of from 70 °C to 99 °C in the presence of a thermal initiator, wherein said initiator is used in the amount of 0.05 to 0.3%, by weight, based on dry polymer weight, and wherein from 0.03% to less than half of said initiator is present during the first 10%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer, and a neutralizer, wherein said neutralizer is used in the amount of from 5% to 75%, on an equivalents basis, based on said monoethylenically unsaturated acid monomer, and wherein less than half of said neutralizer is present during the first 25%, by weight, based on dry polymer weight, of the conversion of monomers to said emulsion polymer.

18. (new) An aqueous coating composition as claimed in claim 2, wherein the copolymerized units of monoethylenically unsaturated acid monomer comprise copolymerized sulfoethyl methacrylate or phosphoethyl methacrylate.